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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,744	08/17/2005	Yosuke Egawa	2005-0010A	2806
513	7590	08/03/2006	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P.			CHEN, VIVIAN	
2033 K STREET N. W.				
SUITE 800			ART UNIT	
WASHINGTON, DC 20006-1021			PAPER NUMBER	
			1773	

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/520,744

Applicant(s)

EGAWA, YOSUKE

Examiner

Vivian Chen

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-26 is/are allowed.
- 6) ☒ Claim(s) 27-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1773

## **DETAILED ACTION**

1. Claims 1-20 have been cancelled by Applicant.
2. For the purposes of this Office Action, the term "forming" is deemed to refer to the shaping of plastic pieces. (See "forming" entry in POLYMER TECHNOLOGY DICTIONARY)

### ***Claim Rejections - 35 USC § 103***

1. Claims 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over WNUK ET AL (US 5,939,467), in view of ULLMANN'S ENCYCLOPEDIA OF INDUSTRIAL CHEMISTRY (ULLMANN'S) and KHEMANI ET AL (US 6,573,340).

WNUK ET AL '467 discloses multilayer films comprising at least one layer of an amorphous polylactide polymer and at least one layer of another biodegradable polymer such as a high melting point aliphatic polyester having a typical T<sub>m</sub> of 76 C or more. The film is typically formed by coextrusion and is formable. (line 23-50, col. 7; line 49-68, col. 18; line 27, col. 33 to line 20, col. 34)

ULLMANN'S discloses that it is well known in the art to produce shaped articles from multilayer film structures via thermoforming. (section 7)

KHEMANI ET AL discloses that it is well known in the art to use aliphatic polyesters having typical T<sub>m</sub> values of over 100 C and T<sub>g</sub> values of less than 0 C in biodegradable film applications. (line 5, col. 10 to line 4, col. 12)

Art Unit: 1773

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use commercially available aliphatic copolyesters in the multilayer films of WNUK ET AL '467 and to form shaped articles from the resultant films order to form biodegradable products with improved performance, compostability and/or processibility. One of ordinary skill in the art would have utilized the polylactide layer(s) as the core layer or the surface layers (claim 28-29) depending on the particular combination of biodegradability, mechanical properties, heat-sealability, abuse resistance, environmental resistance, etc. as required by specific applications. Regarding claims 27-32, the forming temperature is a product-by-process limitation and is not further limiting in as so far as the structure of the product is concerned. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. *The patentability of a product does not depend on its method of production.* If the product in the product-by-process claim is the same or or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." [emphasis added] *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP 2113. Once a product appearing substantially identical is found, the burden shifts to applicant to show a *unobvious* difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1993). See MPEP 2113. If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the product is unpatentable even though the prior product was made by a different process. The patentability of a product is based on the product itself, and is not dependent on its method of production.

***Response to Arguments***

2. Applicant's arguments filed 5/3/2006 have been fully considered but they are not persuasive.

(A) Applicant argues that the recited method steps are critical and results in formed bodies with superior heat resistance. However, Applicant has not provided probative evidence that the claimed product is materially different (e.g., in physical or chemical structure) from the laminates as disclosed in WNUK ET AL '467.

(B) Applicant argues that Comparative Example 3 in the specification provides evidence of criticality and unexpected results from the recited forming temperature. However, any showing provided by the specification is not commensurate in scope with the present claims (e.g., with respect to composition of various layers, forming temperatures, etc.)

***Allowable Subject Matter***

3. Claims 21-26 are allowable over the prior art of record.

4. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to disclose or suggest the recited method of forming a biodegradable laminate sheet comprising a non-oriented low crystallinity polylactic acid-based layer and a non-polylactic acid-based layer having the recited T<sub>g</sub> and T<sub>m</sub>, wherein the laminate is formed at a temperature greater than the T<sub>m</sub> of the non-polylactic acid-based layer. JP 2002-248677 fails to disclose the forming of multilayer films with differing thermal characteristics; WNUK ET AL '467 fails to disclose the recited forming temperature.

Art Unit: 1773

*Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (571) 272-1506. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

The General Information telephone number for Technology Center 1700 is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 1, 2006



Vivian Chen  
Primary Examiner  
Art Unit 1773